A Reliable Solution for Closed Circuit Cooling Applications

ACHEs are a family of custom designed heavy duty fin tube heat exchangers which allow the direct cooling by air of various process mediums. ACHEs are used for many Industrial Applications, such as Power, Chemical, ORC Plants, Oil & Gas, Steel Industry and many other Applications.

Air Cooled Heat Exchangers, as direct dry cooling systems, can guarantee the maximum possible operation flexibility over a wide cooling capability range for Power Plants, Refineries, Oil & Gas industries, Chemical industries, Steel industries, Liquid Coolers, Gas Coolers, Process Condensers and many other services.

Our ACHE thermal designs are directly performed by experienced Process & Thermal Engineers utilizing the well-known HTRI software and by means of our internally developed software and calculation tools.

Normal scope of supply for an ACHE installation includes the finned tube heat exchanger bundles, steel support structure, fan drive equipment, including axial fans, v-belt drives, bearing shafts and electric motors. Additionally, on a case to case basis, other auxiliaries such as automatic or manual control louvers, semi-automatic cleaning system, inlet/outlet piping, remote and local control instruments, manual and automatic valves, circulating pumps, expansion tank, winterization features and other miscellaneous features can be included in the scope.

ACHE Main components
- Safety grid
- Fan ring
- Plenum chamber
- Tubes bundle headers
- Finned tubes
- Axial fan
- Bearing shaft
- Electric motor
- Belt transmission

ACHE APPLICATIONS

- H Frame
  - Forced draft
- A Frame
  - Forced draft
- V Frame
  - Induced draft
- T Frame
  - Forced draft
- T Frame
  - Induced draft
### AVAILABLE FINNED TUBES

<table>
<thead>
<tr>
<th>Type</th>
<th>Maximum working temperature</th>
<th>Atmospheric corrosion resistance</th>
<th>Mechanical resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round tube with round aluminium fin “Extruded type”</td>
<td>300 °C</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Round tube with round aluminium fin of “G embedded fin type”</td>
<td>400 °C</td>
<td>Low</td>
<td>Average</td>
</tr>
<tr>
<td>Round tube with round aluminium fin “L-footed fin type” L</td>
<td>120 °C</td>
<td>Average</td>
<td>Low</td>
</tr>
<tr>
<td>Round tube with round aluminium fin “L-footed fin type” KL</td>
<td>120 °C</td>
<td>Average</td>
<td>Low</td>
</tr>
<tr>
<td>Round tube with round aluminium fin “L-footed fin type” LL</td>
<td>250 °C</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>Elliptical fin tube Hot Dip Galvanized Steel (HDGS)</td>
<td>360 °C</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

Various Core Tube Materials Available
ACHE
AVAILABLE FINNED TUBES

Multi Channel
Aluminum Cladded carbon steel flat tube
With brazed aluminum fins “MCT”

Round aluminum tube
With packaged aluminum fins (RAFT)

Maximum working temperature

<table>
<thead>
<tr>
<th></th>
<th>Multi Channel</th>
<th>Round aluminum tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 °C</td>
<td>100 °C</td>
<td></td>
</tr>
</tbody>
</table>

Atmospheric corrosion resistance

<table>
<thead>
<tr>
<th></th>
<th>Multi Channel</th>
<th>Round aluminum tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

Mechanical resistance

<table>
<thead>
<tr>
<th></th>
<th>Multi Channel</th>
<th>Round aluminum tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>Average</td>
<td></td>
</tr>
</tbody>
</table>

ACHE
DIFFERENT HEADER CONFIGURATION

Welded type header
Bonnet type header
Plug type header
Cover type header
Manifold type header

Various Materials Available
ACHE
MAJOR BENEFITS

Our experienced team is able to provide the most **Advanced and Innovative R&D Solutions** that are coupled with our own extensive in-house manufacturing capability.

**This makes SPX Dry Cooling your ideal partner for any ACHE Application**

A GLOBAL PARTNER WITH
THE PROMISE OF EXCELLENCE

HEADQUARTERS
SPX Dry Cooling Belgium SPRL
Avenue Marcel Thiry 81, B2
B-1200 Brussels, Belgium
T +32 (0) 2 761 61 11
F +32 (0) 2 761 61 86

info@spxdrycooling.com
www.spxdrycooling.com